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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,405	09/01/2004	Albrecht Kraus	DE 020055	3399

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
WALFORD, NATALIE K	

ART UNIT	PAPER NUMBER
2879	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/506,405	KRAUS ET AL.	
	Examiner	Art Unit	
	Natalie K. Walford	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 4,331,937) in view of Bachmann et al. (US PUB 2002/0048344).

Regarding claim 1, Brown discloses a light source in figure 1, with a discharge vessel (item 30) which is filled with a filling gas (column 6, lines 65-68), and with an electron beam source (item 32) arranged in vacuum or in a region of low pressure (column 7, line 35), which source generates electrons (column 7, line 38) and propels them through an inlet foil (item 36) into the discharge vessel, characterized in that the inlet foil, but does not expressly disclose that

the foil comprises a diamond layer, as claimed by Applicant. The Examiner notes that Brown does disclose that the foil may be made from titanium, stainless steel, aluminum, or the like. Bachmann is cited to show a foil window that is made out of diamond (FIG. 1, item 1). Bachmann teaches that the diamond foil is transparent to electron rays (page 3, paragraph 28) and avoids the deflection of electron rays (page 2, paragraph 21).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Brown's device to include the foil comprising a diamond layer as suggested by Bachmann for avoiding the deflection of electron rays.

Regarding claim 2, the combined reference of Brown and Bachmann disclose a light source as claimed in claim 1, characterized in that the diamond layer has a thickness below 100 μm, in particular below 50 μm, advantageously below 20 μm (Brown; column 7, lines 41-43 and Bachmann; page 2, paragraph 16).

Regarding claim 3, the combined reference of Brown and Bachmann disclose a light source as claimed in claim 1, characterized in that the diamond layer has a frame (Brown; FIG. 1, item 38).

Regarding claim 4, the combined reference of Brown and Bachmann disclose a light source as claimed in claim 1, characterized in that the diamond layer has a metal brazing layer (Brown; FIG. 1, item 38).

Regarding claim 5, the combined reference of Brown and Bachmann disclose a light source as claimed in claim 1, characterized in that the diamond layer has an organic adhesion layer (Brown; FIG. 1, item 38).

Regarding claim 6, the combined reference of Brown and Bachmann disclose a light source as claimed in claim 1, characterized in that the electron beam source comprises a thermionic electron emitter (Brown; FIG. 1, items 18 and 20).

Regarding claim 7, the combined reference of Brown and Bachmann disclose a light source as claimed in claim 1, characterized in that the electron beam source comprises a field emitter (Brown; FIG. 1, items 18 and 20).

Regarding claim 8, Brown discloses a method of manufacturing a foil (item 36) for a light source in figure 1, characterized by the following process steps: atoms are deposited (column 7, lines 41-48) on a substrate (item 38) so as to form a foil (item 36), and a portion of the substrate is etched away such that a remaining portion of the substrate forms a frame (item 38) for the foil, but does not expressly disclose that the atoms are carbon and that the foil being formed is a diamond foil, as claimed by Applicant. Bachmann is cited to show a foil window that is made out of diamond (FIG. 1, item 1). Bachmann teaches that the diamond foil is transparent to electron rays (page 3, paragraph 28) and avoids the deflection of electron rays (page 2, paragraph 21). The Examiner notes that it is known in the art that diamond is made from carbon atoms, hence it would have been obvious to one having ordinary skill in the art that the atoms being used to make a diamond foil layer were carbon atoms.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Brown's invention to include the atoms being carbon and that the foil being formed is a diamond foil as suggested by Bachmann for avoiding the deflection of electron rays.

Regarding claim 9, Brown discloses a method of manufacturing a foil (item 36) for a light source in figure 1, characterized by the following process steps: atoms are deposited (column 7, lines 41-48) on a substrate (item 38) so as to form a foil (item 36), the foil is removed from the substrate, and the foil is brazed (column 7, lines 44-48) to a frame (item 38), but does not expressly disclose that the atoms are carbon and that the foil being formed is a diamond foil, as claimed by Applicant. Bachmann is cited to show a foil window that is made out of diamond (FIG. 1, item 1). Bachmann teaches that the diamond foil is transparent to electron rays (page 3, paragraph 28) and avoids the deflection of electron rays (page 2, paragraph 21). The Examiner notes that it is known in the art that diamond is made from carbon atoms, hence it would have been obvious to one having ordinary skill in the art that the atoms being used to make a diamond foil layer were carbon atoms.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Brown's invention to include the atoms being carbon and that the foil being formed is a diamond foil as suggested by Bachmann for avoiding the deflection of electron rays.

Regarding claim 10, Brown discloses a method of manufacturing a foil (item 36) for a light source in figure 1, characterized by the following process steps: atoms are deposited on a substrate (item 38) so as to form a foil (item 36), the foil (8) is removed from the substrate, and the foil is adhered (column 7, lines 44-48) to a frame (item 38), but does not expressly disclose that the atoms are carbon and that the foil being formed is a diamond foil, as claimed by Applicant. Bachmann is cited to show a foil window that is made out of diamond (FIG. 1, item 1). Bachmann teaches that the diamond foil is transparent to electron rays (page 3, paragraph 28)

and avoids the deflection of electron rays (page 2, paragraph 21). The Examiner notes that it is known in the art that diamond is made from carbon atoms, hence it would have been obvious to one having ordinary skill in the art that the atoms being used to make a diamond foil layer were carbon atoms.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Brown's invention to include the atoms being carbon and that the foil being formed is a diamond foil as suggested by Bachmann for avoiding the deflection of electron rays.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Daugherty et al. (US 4,211,983) is cited to show a high energy electron beam driven laser.

Bradley (US 4,230,994) is cited to show a pulse circuit apparatus for gas discharge lasers.

Lemelson (US 5,740,941) is cited to show carbon atoms being used to form diamond.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie K. Walford whose telephone number is (571)-272-6012. The examiner can normally be reached on Monday-Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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